

from *Acheta abbreviata*, etc. He remarked that when such plants were found in animals they were usually very abundant.

Dr. L. then stated that very slight modifications in the five essential conditions of life were sufficient to produce the vast variety of living beings upon the globe. As an instance, he mentioned he had lying upon his table a saucer with a cork bottom, in which lay a partly dissected *Passalus cornutus* half immersed in water. Two days afterwards he noticed upon the part of the insect above the water a quantity of *Mucor mucedo?* growing, and from the part within the water numerous fine, stiff filaments, which upon examination proved to be *Achyla prolifera*; upon the cork around the insect grew a third genus, consisting of fine cottony filaments, which were articulated, of which he exhibited a drawing; and upon the insect at the surface of the water, but not within the latter, grew a fourth genus, of which he also exhibited a drawing.

He also stated he had had the good fortune of observing in a single morning all the stages of development of *Achyla prolifera* growing from some individuals of *Ascarides* which had been lying in a dish of water for a few days.

In reply to some remarks made by members, Dr. Leidy said he could not admit the doctrine of spontaneous generation, but rather thought modifications in the essential conditions of life favorable to the development of different, and always pre-existing germs derived from a parent.

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*February 19th.*

Dr. MORTON, President, in the Chair.

A letter was read from Mr. J. T. Becker, dated Paris, 10th December, 1849, proposing exchanges with the Academy in Entomology. Referred to the Committee on Entomology.

Also a letter from H. Lecog, dated Clermon-ferrand, January 10, 1850, proposing exchanges in Conchology with the Academy, or with individual members of the Society. Referred to the Committee on Conchology.

Dr. Leidy offered the following observations:

Dr. Leidy presented to the examination of the Society a colored and several other drawings of what he termed an entophytic forest, taken from a portion of the mucous membrane of the ventriculus of *Passalus cornutus*. He remarked that at least six species of entophyta were found growing upon the mucous membrane of the ventriculus of *P. cornutus*, which were often present in great quantity, frequently some thousands, and which from their number, polymorphous appearance of several species, and attachment to various appendages of the mucous membrane, resembled very strikingly a miniature Brazilian forest, which was heightened in some degree by the existence of a nematoid worm, which recalled to mind the idea of one of the serpents of such a forest.

A somewhat similar drawing he exhibited, taken from the small intestine of *Julus marginatus*.

Other drawings were also presented. Dr. L. stated that among his collection of living Julides, he had a number of times observed individuals to become dull

in color, and become almost motionless, which phenomena were followed by the death of the animal. It occurred to him that, in such a state, there might be exhibited some change in the character of its entophyta, as usually found in the active condition of the animal. Upon removing the intestine of an individual which had just died, he noticed that the entozoa which usually occupied the small intestine, had passed into the rectum, and upon the surface of the mucous membrane of the former, was developed a new plant. This is an oblate spheroidal body, white in color, translucent, embossed upon the surface, and presenting, when viewed by transmitted light, some resemblance to a minute bleached shell of an Echinus; by reflected light, it resembled a minute, white Lycoperdon. This plant was strewn all over the mucous membrane, but grew in greatest quantity along the course of filaments of Enterobrus, which appeared attached to the mucous membrane throughout their length by it. When compressed it opened, and spread into several leaf-like segments, and exuded a clear fluid with faint granules. He thought that probably this plant might be another stage in the existence of Enterobrus, for in the large number of individuals of Julus which he had examined, upwards of 130, although he had observed the development of Enterobrus from spore-like bodies, even to the formation of what he supposed to be the sporangia, yet he had never been able to detect the formation of spores, and when he saw this new plant enveloping the Enterobrus filaments, he suspected that there might be a phenomenon here presented analogous to the alternation of generation in certain animals, but had not yet satisfied himself that such was the case.

He also stated he had discovered a fourth species of Enterobrus in Polydesmus virginensis, and another entophyte analogous to Enterobrus growing in Polydesmus granulatus. The latter differs from Enterobrus in having numerous globular cells at the free extremity of the principal cell. He adverted to the several theories of cell formation, and said that in the last mentioned plant, in the development of the globular terminal cells, the division of the permanent cell wall followed the division of the cell contents. In conclusion, he observed, that these matters would be more fully treated of hereafter, in a memoir which he was preparing on the subject.

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*February 26th.*

Dr. MORTON, President, in the Chair.

The Committee on Conchology presented a report, recommending that M. Lecoq's proposition, for an exchange of shells, be declined. Adopted.

The Committee on Mr. Conrad's paper, read February 12th, 1850, reported in favor of publication in the Proceedings.